

CERTIFICATE OF TYPE APPROVAL

This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	McMurdo Limited
Address	Silver Point Airport Service Road Portsmouth Hants, PO3 5PB United Kingdom (UK)
Product Type	SEARCH AND RESCUE TRANSPONDER (SART)
Product Description	Portable search and rescue radar transponder with optional mast and/or mounting bracket. - Type: "McMurdo S4 Rescue SART" / "Sailor SART II"
Specified Standards	SOLAS 74, as amended, Regulations III/4, 34, 35 and 36. IMO Resolutions A.530 (13), A.802(19) and A.694(17) ITU-R M.628-3 (11/93). EN 61097-1 (1993), IEC 61097-1 (1992), EN 60945 (1997), IE 60945 (1996)

The attached Design Appraisal Document forms part of this certificate.

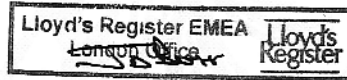
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue 18 November 2003

Expiry date 17 November 2008

Certificate No. SAS S030117

Signed



Sheet No 1 of 3

Name

Capt. J. D. Burr
Surveyor to Lloyd's Register EMEA
A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid certificate.

DESIGN APPRAISAL DOCUMENT

Date 18 November 2003	Quote this reference on all future communications MSG/STAT/TA/LSA/PDJ
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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS S030117

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

<u>Plan No.</u>	<u>Rev</u>	<u>Rev Date</u>	<u>Title or Description</u>	<u>Stat</u>	<u>Status date</u>
-	-	10/07/03	Technical Description & Specification	N	18 Nov 2003
86-910A	2	09/10/03	SART General Assembly (3 sheets)	A	18 Nov 2003
86-410B	1	08/10/03	SART 4 General Assembly (2 sheets)	A	18 Nov 2003
86-420-XXXB	1	07/10/03	SART 4 Main Body	N	18 Nov 2003
86-444D	1	24/10/03	SART 4 Pole bracket label	N	18 Nov 2003
86-430A	2	07/10/03	SART 4 Battery Pack	N	18 Nov 2003
86-471-XXXD	1	24/10/03	Battery Pack Label (2 Sheets)	N	18 Nov 2003
86-439A	2	28/10/03	Battery Case with lanyard assembly	A	18 Nov 2003
86-426-XXXD	1	24/10/03	Equipment Label	A	18 Nov 2003
86-701B	1	11/08/03	PCB Assy (SMT) Sheets 1-4 incl	N	18 Nov 2003
86-903V	A	-	Product Test Specification	-	-
86-500C	1	11/08/03	SART 4 (2 Sheets)	-	-
86-500L	1	11/08/03	SART 4 PCB	-	-
-	-	10/07/03	Circuit Description	-	-
-	-	10/07/03	EMC Design Considerations	-	-
86-920	0	-	User Manuals (McMurdo S4 Rescue SART & Sailor SART II)	N	18 Nov 2003

TEST REPORTS

Report Title or Report Author

Tüv Product Service Ltd., Report of Tests

Report No.

RM 610860/01 Issue 1

Date

October 2003

CONDITIONS OF CERTIFICATION

- Detailed fitting, maintenance and test instructions are to be provided to each purchaser of the subject transponder.
- If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply.
- Production items of the subject equipment are to be manufactured in accordance with either:
 - an approved Production-Quality Assurance system (Module D)
 - an approved Product-Quality Assurance system (Module E)

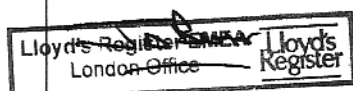
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3. the Product Verification process (Module F) or
4. the Unit Verification process (Module G) of the Marine Equipment Directive.
4. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure compliance with SOLAS Regulation III/5.
5. Production tests are to be conducted in accordance with the applicable requirements of the Specified Standards and each item, batch, or lot is to be delivered with an LR Certificate of SOLAS Production Testing issued by the attending LR Surveyors following their witness of the tests. This does not preclude any further testing to additional requirements of the Marine Administration of the country where the ship is registered (i.e. the flag state), or those acting on behalf of that Administration.
6. Should a change of Place of Production from that stated below be required, i.e. where the final stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained.

PLACE OF PRODUCTION

At above manufacturer's facilities.



Capt. J. D. Burr
Principal Surveyor
Dry Cargo Ship Section
Marine Support Group
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.